

NPL Site Narrative for Tulalip Landfill

TULALIP LANDFILL Marysville, Washington

Conditions at Proposal (July 29, 1991): The Tulalip Landfill covers approximately 146 acres on the Tulalip Indian Reservation near Marysville, Snohomish County, Washington. The site is bounded by Ebey Slough to the north, Steamboat Slough to the south, and Possession Sound to the west. All these surface water bodies flow into northern Puget Sound, a Federally designated National Estuary. This area is highly productive for salmon and shellfish and provides habitat for Federally-threatened species.

In 1964, the Tulalip Tribe leased the land to Seattle Disposal Co. The company accepted municipal, industrial, and hospital waste from the greater Seattle area. The site (originally a wetland) was cleared and canals were cut into the site, allowing waste to be barged in from Seattle. Eventually the barge canals were filled with waste. An estimated 4 million cubic yards of waste were deposited at the site from 1964 to 1979, when the landfill was closed in accordance with a Federal consent decree.

In February 1988, EPA conducted an extensive inspection of the site and the surrounding environment. Ground water, wetland water, and slough water contained heavy metals (including lead, copper, chromium, and cadmium) in excess of EPA's Maximum Contaminant Levels established under the Safe Drinking Water Act and marine Ambient Water Quality Criteria established under the Clean Water Act. An estimated 7,800 people obtain drinking water from private and municipal wells within 4 miles of the site, the nearest within 0.9 mile.

EPA also found elevated levels of metals, volatiles (including toluene and xylene), semivolatiles, and PCBs in leachate and pooled water on-site. Numerous strains of opportunistic pathogens were detected in leachate, pooled water, and slough samples. These opportunistic pathogens, due to infiltration of estuarine water rich in nutrients and dissolved oxygen, are resistant to several antibiotics and can therefore survive for years.

In 1987, EPA issued a modified permit under the National Pollutant Discharge Elimination System (NPDES) requiring, among other items, the Tulalip Tribe to collect all leachate generated by the site and transport it off-site for treatment. The Tribe has not complied. An estimated 10 million to 90 million gallons of leachate are generated per year. During a December 1990 NPDES inspection, EPA found the site was receiving demolition debris not previously approved for disposal. Logs recently placed on-site were generating colored liquids. The Tribe has discontinued disposal of all demolition debris at EPA's request.

Status (April 1995): In August 1993, EPA and several potentially responsible parties, including waste generators, transporters, and the past operator of the landfill, signed an Administrative Order on Consent to conduct a RI/FS at the site. Preliminary results from this investigation indicate that landfill leachate leaving the site exceeds marine water quality criteria for heavy metals and other contaminants including chromium, copper, lead, mercury, nickel, zinc, ammonia, heptachlor, and aldrin. PCBs were also found at elevated levels. Soil adjacent to the landfill indicates elevated levels of heavy metals, pesticides, PCBs, and semivolatile organic compounds (SVOCs). Sediment samples from wetlands adjacent to the landfill show elevated levels of heavy metals, polycyclic aromatic hydrocarbons (PAHs), pesticides, and SVOCs.

EPA is currently reviewing a feasibility study which evaluates remedy alternatives that would contain the landfill contaminants.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at [ATSDR - ToxFAQs](http://www.atsdr.cdc.gov/toxfaqs/index.asp) (<http://www.atsdr.cdc.gov/toxfaqs/index.asp>) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.